

## **REMARKS:**

Pursuant to the 28 April 2009 Office Action, Claims 4-6, 11, 12, 24, 31, 33-37, 40, and 42-44 currently stand withdrawn as being either directed to a non-elected species or directed to a non-elected invention. Claims 5, 6, 11, 12, 17, 22, 31, and 33-37 are hereby cancelled without prejudice. Claims 1, 8, 15, 18, 21, 23, 24, and 41 are hereby amended. Claims 1-3, 7-10, 13-16, 18-21, 23, 25-30, 32, and 38-44 are pending in the present application.

**Claims 4, 24, 40, and 42-44 currently stand withdrawn; however, as explained in detail below, the Applicants submit that the Examiner's withdrawal of Claims 4, 24, 40, and 42-44 was improper. As such, Claims 4, 24, 40, and 42-44 are not hereby cancelled.**

Claims 8, 18, and 41 stand objected to for lacking proper antecedent basis in the claims. Claims 1, 15-18, and 21-23 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1-3, 7, 25, 27, 28, and 41 stand rejected under 35 U.S.C. § 102(b) over U.S. Patent 5,439,082 to McKeown et al. ("McKeown"). Claim 8 stands rejected under 35 U.S.C. § 103(a) over McKeown in view of E.P. Publication No. 0537927 ("EP '927"). Claims 9, 26, 38, and 39 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of U.S. Patent 5,906,254 to Schmidt et al. ("Schmidt"). Claims 10, 13, 15, and 17-20 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of U.S. Patent 5,458,222 to Pla et al. ("Pla"). Claim 14 stands rejected under 35 U.S.C. § 103(a) over McKeown in view of Pla, and in further view of EP '927. Claims 16, 21-23, 29, 30, and 32 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of Pla, and in further view of U.S. Patent 5,520,375 to Leibach et al. ("Leibach").

The Applicants submit that the foregoing amendments add no new matter to the application.

### **Interview Summary I:**

A telephone conversation between the Examiner and the undersigned attorney's technical assistant, Noah Tevis, was conducted on 14 July 2009. Mr. Tevis questioned the Examiner as to why Claims 4, 24, 40, and 42-44 were listed as withdrawn in the 28 April 2009 Office Action and not examined, after Claims 4, 24, 40, and 42-44 had been properly elected. The Examiner stated that Claims 4, 24, 40, and 42-44 were withdrawn because the Examiner decided that Claims 4, 24, 40, and 42-44 did not read upon the Species elected by the Applicants in the Response to Restriction Requirement filed by the Applicants on 23 September 2008.

### **Interview Summary II:**

A telephone conversation between the undersigned attorney, Mr. Tevis, and the Examiner's supervisor, Examiner Robert Siconolfi, was conducted on 28 July 2009. The propriety of the 28 April 2009 Office Action, in particular, whether it was proper for the Examiner to withdraw previously elected and acknowledged claims without explanation, was discussed.

Examiner Siconolfi stated that even though the Examiner probably should have issued a third Restriction Requirement, instead of withdrawing claims without explanation, it was within the Examiner's discretion to do so. The undersigned attorney respectfully disagreed with Examiner Siconolfi, stating that the Applicants' election of invention without traverse, i.e., Group I consisting of Claims 1-4, 7-10, 13-30, 32, 34, and 37-44, was based upon the Examiner's acknowledgement of Applicants' designation of claims that read upon the elected Species 16, said designation being set forth in Applicants' Response to Restriction Requirement filed on 23 September 2008.

### **Interview Summary III:**

A telephone conversation between the undersigned attorney and Director Kathy Matecki was conducted on 28 July 2009. The propriety of the 28 April 2009 Office Action, in particular, whether it was proper for the Examiner to withdraw previously elected and

acknowledged claims without explanation, was discussed. In addition, the Applicants' right to Petition the species determination was also discussed.

Director Matecki stated that the previously elected claims should not have been unilaterally withdrawn without explanation. Director Matecki stated that the Applicants could request reconsideration of the withdrawal of Claims 4, 24, 40, and 42-44, prior to filing a Petition. Director Matecki further stated that a Petition may later be filed if the Examiner refuses to reconsider the withdrawal of Claims 4, 24, 40, and 42-44.

**Claim Elections/Restrictions:**

The Examiner states that Claims 4-6, 11, 12, 24, 31, 33-37, 40, and 42-44 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. The Examiner further states that election of the aforementioned claims was made without traverse in the replies filed on 23 September 2008 and 16 January 2009. The Applicants respectfully disagree.

The Response to Restriction Requirement filed on 23 September 2008 stated: **"The Applicants elect, without traverse, to pursue the claims Species 16, according to Figure 23A. The Applicants submit that at least Claims 1-4, 7-10, 13-30, 32, and 34-44 are broad enough to read on the elected Species 16."**

The Response to Restriction Requirement filed on 16 January 2009 stated: **"The Applicants elect, without traverse, to pursue the claims of Group I, i.e., Claims 1-4, 7-10, 13-30, 32, 34, and 37-44, in accordance with the applicable rules of practice and to advance the prosecution of the subject application."** As such, the Applicants respectfully submit that Claims 4, 24, 40, and 42-44 should not have been withdrawn from further consideration by the Examiner, and should have been examined. Therefore, the Applicants respectfully request the Examiner reconsider the withdrawal of Claims 4, 24, 40, and 42-44 and either examine Claims 4, 24, 40, and 42-44, or withdraw the Office Action and issue a proper restriction requirement.

**Claim Objections:**

Claims 8, 18, and 41 stand objected to for lacking proper antecedent basis in the claims. Claims 8, 18, and 41 are hereby amended. The Applicants submit that the foregoing amendments provide proper antecedent basis in the claims.

**Rejections Under 35 U.S.C. § 112:**

Claims 1, 15-18, and 21-23 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

With regard to Claim 1, the Examiner states that “within housing” is indefinite so that it is unclear to the Examiner whether the housing recited in line 3 is intended to be the same or different from that recited in line 2. Claim 1 is hereby amended so as to read “within the housing”.

With regard to Claim 18, the Examiner states that the phrase “a piston” in line 2 is indefinite so that it is unclear to the Examiner whether the piston recited in line is intended to be the same or different from that recited in line 3 of Claim 10. Claim 18 is hereby amended so as to clarify the relationship among the elements.

With regard to Claims 15 and 21, the Examiner states claim element “means associated with the second tuning port for providing an additional degree of freedom” in claims 15 and 21 is a means plus function limitation that invokes 35 U.S.C. § 112, sixth paragraph. The Examiner further states that the written description fails to clearly link or associate the disclosed structure, material, or acts to the claimed function such that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function.

Claims 15 and 21 are hereby amended so that the claim limitation will no longer be a means plus limitation under 35 U.S.C. § 112, sixth paragraph. The Applicants submit that the amendments to Claims 15 and 21 overcome the Examiner’s rejections under 35 U.S.C. § 112, sixth paragraph.

Claims 16-18, 22, and 23 stand rejected due to their dependency from a rejected claim. Claims 18, 23, and 24 are hereby amended so as to provide consistency with the amendments made herein to Claims 15 and 21. In addition, Claims 17 and 22 are canceled herein to provide consistency with the amendments made herein to Claims 15 and 21. Claim 16 is not herein amended, but Applicants submit that the amendment herein to Claim 15 overcome the Examiner's rejection of Claim 16.

**Rejections Under 35 U.S.C. § 102(b):**

Claims 1-3, 7, 25, 27, 28, and 41 stand rejected under 35 U.S.C. § 102(b) over McKeown. However, since McKeown fails to disclose all of the limitations of claims 1-3, 7, 25, 27, 28, and 41 as discussed below, this rejection is respectfully traversed.

**Claims 1-3 and 7**

Claim 1 is an independent claim, and Claims 2, 3, and 7 depend from Claim 1. Accordingly, the following remarks made in connection with Claim 1 apply equally to Claims 2, 3, and 7.

McKeown discloses a vibration isolator which uses an inductance coil (67) which applies a magnetic force to the tuning slug (33). The magnetic force acting upon the tuning slug (33) affects the acceleration and deceleration of tuning slug (33), so as to provide for a change to the isolation frequency (Col. 7, lines 14-23). It is important to note that tuning slug (33) is constructed out of magnetic material, such that inductance coil (67) produces a forced directly upon the tuning slug (33).

In contrast, Claim 1 includes a vibration isolator comprising at least one actuator coupled to the piston for selectively transferring forces *to the piston*. In such an arrangement, the piston reacts forces from the actuator. This is completely different from the vibration isolator in McKeown which uses to an inductance coil to impart magnetic forces *directly upon a tuning slug*. For at least this reason, the Applicants submit that Claim 1 is not anticipated by McKeown.

Further in regards to Claim 2; Claim 2 requires a vibration isolator, wherein the tuning mass is a fluid. McKeown doesn't disclose a vibration isolator having an active tuning element wherein the tuning mass is a fluid. McKeown does disclose the use of an inductance coil to impart magnetic tuning forces upon a tuning slug, but in such an embodiment, a solid tuning slug having magnetic properties is required. For at least this reason, the Applicants submit that Claim 2 is not anticipated by McKeown.

Further in regards to Claim 7, McKeown discloses a vibration isolation having a cylinder (7), which is sealed by upper and lower end caps (27, 29). As such, cylinder (7) and end caps (27, 29) make up a housing so that tuning port (31) is in the interior of the housing. This is completely different than that vibration isolator of Claim 7 wherein the tuning port is exterior to the housing.

Accordingly, since McKeown fails to disclose all of the limitations of Claim 1, Wing cannot anticipate Claim 1, or Claims 2, 3, and 7, which depend from Claim 1. Therefore, it is respectfully requested that the rejection of Claims 1-3 and 7 under 35 U.S.C. § 102(b) be reconsidered and withdrawn. The Applicants respectfully request that Claims 1-3 and 7 be allowed.

#### Claims 25 and 27

Claim 25 is an independent claim, and Claim 27 depends from Claim 25. Accordingly, the following remarks made in connection with Claim 25 apply equally to Claim 27.

McKeown discloses a vibration isolator which uses an inductance coil (67) which applies a magnetic force to the tuning slug (33). The magnetic force acting upon the tuning slug (33) affects the acceleration and deceleration of tuning slug (33), so as to provide for a change to the isolation frequency (Col. 7, lines 14-23). It is important to note that tuning slug (33) is constructed out of magnetic material, such that inductance coil (67) produces a forced directly upon the tuning slug (33).

In contrast, Claim 25 includes a vibration isolator comprising a second multistage piston resiliently disposed with a housing, the second multistage piston being configured

to define a first plurality of stages in fluid communication with a first fluid chamber, and a second plurality of stages in fluid communication with a second fluid chamber. This is completely different from the vibration isolator in McKeown, at least because McKeown does not disclose a multistage piston being configured to define a plurality of stages. The Examiner refers to end portions of tuning slug (33) as being a plurality of stages of a piston; however, tuning slug (33) cannot be equated to a multistage piston at least for the reason that tuning slug (33) has a completely different functionality than a multistage piston. For at least this reason, the Applicants submit that Claim 25 is not anticipated by McKeown.

Further in regards to Claim 27, McKeown discloses a tuning slug (33) having a recessed portion on either end for housing a spring. Such a spring acts as a means for dealing with overtravel of tuning slug (33). In contrast, Claim 27 is directed to a vibration isolator wherein the individual stages of the first plurality of stages and the individual stages of the second plurality of stages are configured in an *alternating arrangement*.

Accordingly, since McKeown fails to disclose all of the limitations of Claim 25, Wing cannot anticipate Claim 25, or Claim 27, which depends from Claim 25. Therefore, it is respectfully requested that the rejection of Claims 25 and 27 under 35 U.S.C. § 102(b) be reconsidered and withdrawn. The Applicants respectfully request that Claims 25 and 27 be allowed.

#### Claim 28

McKeown discloses a vibration isolator which uses an inductance coil (67) which applies a magnetic force to the tuning slug (33). The magnetic force acting upon the tuning slug (33) affects the acceleration and deceleration of tuning slug (33), so as to provide for a change to the isolation frequency (Col. 7, lines 14-23). It is important to note that tuning slug (33) is constructed out of magnetic material, such that inductance coil (67) produces a forced directly upon the tuning slug (33).

In contrast, Claim 28 includes a vibration isolator comprising a first multistage piston resiliently disposed within a housing, the first multistage piston being configured to

define a first plurality of stages in fluid communication with a first fluid chamber, and a second plurality of stages in fluid communication with a second fluid chamber. This is completely different from the vibration isolator in McKeown, at least because McKeown does not disclose a multistage piston being configured to define a plurality of stages. The Examiner refers to end portions of tuning slug (33) as being a plurality of stages of a piston; however, tuning slug (33) cannot be equated to a multistage piston at least for the reason that tuning slug (33) has a completely different functionality than a multistage piston. For at least this reason, the Applicants submit that Claim 28 is not anticipated by McKeown.

Accordingly, since McKeown fails to disclose all of the limitations of Claim 28, Wing cannot anticipate Claim 28. Therefore, it is respectfully requested that the rejection of Claim 28 under 35 U.S.C. § 102(b) be reconsidered and withdrawn. The Applicants respectfully request that Claim 28 be allowed.

#### Claim 41

McKeown discloses a vibration isolator which uses an inductance coil (67) which applies a magnetic force to the tuning slug (33). The magnetic force acting upon the tuning slug (33) affects the acceleration and deceleration of tuning slug (33), so as to provide for a change to the isolation frequency (Col. 7, lines 14-23). It is important to note that tuning slug (33) is constructed out of magnetic material, such that inductance coil (67) produces a forced directly upon the tuning slug (33).

In contrast, Claim 41 includes a vibration isolator comprising at least one actuator operably associated with the tuning fluid to counteract vibration from the vibrating body. In such an arrangement, the fluid reacts forces from the actuator. This is completely different from the vibration isolator in McKeown which uses to an inductance coil to impart magnetic forces directly *upon a tuning slug*. For at least this reason, the Applicants submit that Claim 41 is not anticipated by McKeown.

Accordingly, since McKeown fails to disclose all of the limitations of Claim 41, Wing cannot anticipate Claim 41. Therefore, it is respectfully requested that the rejection



of Claim 41 under 35 U.S.C. § 102(b) be reconsidered and withdrawn. The Applicants respectfully request that Claim 41 be allowed.

**Rejections Under 35 U.S.C. § 103(a):**

Claim 8 stands rejected under 35 U.S.C. § 103(a) over McKeown in view of EP '927. Claims 9, 26, 38, and 39 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of Schmidt. Claims 10, 13, 15, and 17-20 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of Pla. Claim 14 stands rejected under 35 U.S.C. § 103(a) over McKeown in view of Pla, and in further view of EP '927. Claims 16, 21-23, 29, 30, and 32 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of Leibach. These rejections are respectfully traversed as discussed below.

**Claim 8**

Claim 8 stands rejected under 35 U.S.C. § 103(a) over McKeown in view of EP '927. The Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified a tuning port of McKeown to have been a tuning port that is integrated into the wall of the housing, in view of the teachings of EP '927, in order to provide an alternate, well-known means of placing the first and second fluid chambers in communication with each other and means for varying the degree of isolation. At least because the proposed combination of McKeown and EP '927 fails to disclose or suggest all of limitations of Claim 1, the proposed combination of McKeown and EP '927 cannot render Claim 8 obvious.

Claim 8 depends from Claim 1. Accordingly, the remarks above in connection with Claim 1 apply equally to Claim 8. That is, McKeown cannot anticipate or render obvious Claim 8. EP '927 discloses a fluid mount with the capability of actively controlling the amount of vibrational energy transmitted. The length of inertia track (20) can be adjusted via couplings (21), thereby adjusting the desired isolation frequency. The fluid mount disclosed in EP '927 also comprises an electromagnetic actuator (36) featuring a magnet (44), pole piece (46), voice coil (48), and spool (50) with centering springs (52). Spool (50) is configured to pump fluid in response to movement of coil (48) (Col. 7, lines 45, 46).

EP '927, like McKeown fails to disclose a vibration isolator comprising at least one actuator coupled to the piston for selectively transferring forces to the piston, as disclosed in Claim 1, and therefore also fails to disclose the more specific limitations cited in Claim 8. Thus, McKeown and EP '927, whether considered separately or in combination as proposed by the Examiner, fail to disclose or suggest all of the limitations of Claim 8.

In light of the remarks above, it is respectfully requested that the rejection of Claim 8 under 35 U.S.C. § 103(a) over McKeown in view of EP '927 be reconsidered and withdrawn.

#### Claim 9

Claim 9 stands rejected under 35 U.S.C. § 103(a) over McKeown in view of Schmidt. The Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the magnetically actuated actuator of McKeown to have included a piezoelectric actuator, as taught by Schmidt in order to provide a functionally equivalent means of exerting force on the floating mass. At least because the proposed combination of McKeown and Schmidt fails to disclose or suggest all of limitations of Claim 1, the proposed combination of McKeown and Schmidt cannot render Claim 9 obvious.

Claim 9 depends from Claim 1. Accordingly, the remarks above in connection with Claim 1 apply equally to Claim 9. That is, McKeown cannot anticipate or render obvious Claim 9. Schmidt discloses a vibration absorber that can possibly integrate a piezoelectric actuator in order to provide a force supply. Schmidt, like McKeown, fails to disclose a vibration isolator comprising at least one actuator coupled to the piston for selectively transferring forces to the piston, as disclosed in Claim 1, and therefore also fails to disclose the more specific limitations cited in Claim 9. Thus, McKeown and Schmidt, whether considered separately or in combination as proposed by the Examiner, fail to disclose or suggest all of the limitations of Claim 9.

In light of the remarks above, it is respectfully requested that the rejection of Claim 9 under 35 U.S.C. § 103(a) over McKeown in view of Schmidt be reconsidered and withdrawn.

#### Claim 26

Claim 26 stands rejected under 35 U.S.C. § 103(a) over McKeown in view of Schmidt. The Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the magnetically actuated actuator of McKeown to have included a piezoelectric actuator, as taught by Schmidt in order to provide a functionally equivalent means of exerting force on the floating mass. At least because the proposed combination of McKeown and Schmidt fails to disclose or suggest all of limitations of Claim 25, the proposed combination of McKeown and Schmidt cannot render Claim 26 obvious.

Claim 26 depends from Claim 25. Accordingly, the remarks above in connection with Claim 25 apply equally to Claim 26. That is, McKeown cannot anticipate or render obvious Claim 26. Schmidt discloses a vibration absorber that can possibly integrated a piezoelectric actuator in order to supply a force supply. Schmidt, like McKeown fails to disclose a multistage piston being configured to define a plurality of stages, as disclosed in Claim 25, and therefore also fails to disclose the more specific limitations cited in Claim 26. Thus, McKeown and Schmidt, whether considered separately or in combination as proposed by the Examiner, fail to disclose or suggest all of the limitations of Claim 26.

In light of the remarks above, it is respectfully requested that the rejection of Claim 26 under 35 U.S.C. § 103(a) over McKeown in view of Schmidt be reconsidered and withdrawn.

#### Claims 38 and 39

Claims 38 and 39 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of Schmidt. The Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the magnetically actuated

actuator of McKeown to have included a piezoelectric actuator, as taught by Schmidt in order to provide a functionally equivalent means of exerting force on the floating mass. At least because the proposed combination of McKeown and Schmidt fails to disclose or suggest all of limitations of Claims 38 and 39, the proposed combination of McKeown and Schmidt cannot render Claims 38 and 39 obvious. Claim 39 depends from Claim 38. Accordingly, the remarks below in connection with Claim 38 apply equally to Claim 39.

McKeown discloses a vibration isolator which uses an inductance coil (67) which applies a magnetic force to the tuning slug (33). The magnetic force acting upon the tuning slug (33) affects the acceleration and deceleration of tuning slug (33), so as to provide for a change to the isolation frequency (Col. 7, lines 14-23). It is important to note that tuning slug (33) is constructed out of magnetic material, such that inductance coil (67) produces a force directly upon the tuning slug (33). Schmidt discloses a vibration absorber that can possibly integrate an actuator to exert a force *between the masses*.

In contrast, Claim 38 includes a vibration isolator comprising at least one solid-state actuator operably associated with the tuning fluid to counteract vibration from the vibrating body. In such an arrangement, the tuning fluid reacts forces from the actuator. This is completely different from the vibration isolator in McKeown which uses to an inductance coil to impart magnetic forces directly *upon a tuning slug*, and the vibration absorber in Schmidt which integrates an actuator to exert a force between two masses.

Schmidt, like McKeown fails to disclose a vibration isolator comprising at least one solid-state actuator operably associated with the tuning fluid to counteract vibration from the vibrating body, as disclosed in Claim 38, and therefore also fails to disclose the more specific limitations cited in Claim 39. Thus, McKeown and Schmidt, whether considered separately or in combination as proposed by the Examiner, fail to disclose or suggest all of the limitations of Claims 38 and 39.

In light of the remarks above, it is respectfully requested that the rejection of Claims 38 and 39 under 35 U.S.C. § 103(a) over McKeown in view of Schmidt be reconsidered and withdrawn.

Claims 10, 13, 15, and 17-19

Claims 10, 13, 15, and 17-19 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of Pla. The Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the actuator of McKeown to have included a piezoceramic actuator, as taught by Pla, in order to provide a functionally equivalent means of exerting force on the floating mass. At least because the proposed combination of McKeown and Pla fails to disclose or suggest all of limitations of Claims 10, 13, 15, and 17-19, the proposed combination of McKeown and Pla cannot render Claims 10, 13, 15, and 17-19 obvious. Claims 13, 15, and 17-19 depend directly or indirectly from Claim 10. Accordingly, the remarks below in connection with Claim 10 apply equally to Claims 13, 15, and 17-19.

McKeown discloses a vibration isolator which uses an inductance coil (67) which applies a magnetic force to the tuning slug (33). The magnetic force acting upon the tuning slug (33) affects the acceleration and deceleration of tuning slug (33), so as to provide for the changing of the isolation frequency (Col. 7, lines 14-23). It is important to note that tuning slug (33) is constructed out of magnetic material, such that inductance coil (67) produces a forced directly upon the tuning slug (33). Pla discloses a piezoceramic actuator plate that is connected to a structure so as to reduce bending vibrations experienced by the structure.

In contrast, Claim 10 is directed to a vibration isolator comprising at least one piezoceramic actuator coupled to the second piston for selectively transferring forces to the second piston. In such an arrangement, the second piston reacts forces from the actuator. This is completely different from the vibration isolator in McKeown which uses to an inductance coil to impart magnetic forces directly *upon a tuning slug*, and the structure in Pla which integrates a piezoceramic actuator to reduce bending vibrations.

Pla, like McKeown fails to disclose a vibration isolator comprising at least one piezoceramic actuator coupled to the second piston for selectively transferring forces to the second piston, as disclosed in Claim 10, and therefore also fails to disclose the more specific limitations cited in Claims 13, 15, and 17-19. Thus, McKeown and Pla, whether

considered separately or in combination as proposed by the Examiner, fail to disclose or suggest all of the limitations of Claims 10, 13, 15, and 17-19.

In light of the remarks above, it is respectfully requested that the rejection of Claims 10, 13, 15, and 17-19 under 35 U.S.C. § 103(a) over McKeown in view of Pla be reconsidered and withdrawn.

#### Claim 20

Claim 20 stands rejected under 35 U.S.C. § 103(a) over McKeown in view of Pla. The Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the actuator of McKeown to have included a piezoceramic actuator, as taught by Pla, in order to provide a functionally equivalent means of exerting force on the floating mass. At least because the proposed combination of McKeown and Pla fails to disclose or suggest all of limitations of Claim 20, the proposed combination of McKeown and Pla cannot render Claim20 obvious.

McKeown discloses a vibration isolator which uses an inductance coil (67) which applies a magnetic force to the tuning slug (33). The magnetic force acting upon the tuning slug (33) affects the acceleration and deceleration of tuning slug (33), thereby changing the isolation frequency (Col. 7, lines 14-23). It is important to note that tuning slug (33) is constructed out of magnetic material, such that inductance coil (67) produces a forced directly upon the tuning slug (33). Pla discloses a piezoceramic actuator plate that is connected to a structure so as to reduce bending vibrations experienced by the structure.

In contrast, Claim 20 is directed to a vibration isolator comprising at least one piezoceramic actuator disposed between the base portion and the housing for selectively transferring forces to the housing. In such an arrangement, the housing reacts forces from the actuator. This is completely different from the vibration isolator in McKeown which uses to an inductance coil to impart magnetic forces directly *upon a tuning slug*, and the structure in Pla which integrates a piezoceramic actuator to reduce bending vibrations.

Pla, like McKeown fails to disclose a vibration isolator comprising at least one piezoceramic actuator disposed between the base portion and the housing for selectively transferring forces to the housing, as disclosed in Claim 20. Thus, McKeown and Pla, whether considered separately or in combination as proposed by the Examiner, fail to disclose or suggest all of the limitations of Claim 20.

In light of the remarks above, it is respectfully requested that the rejection of Claim 20 under 35 U.S.C. § 103(a) over McKeown in view of Pla be reconsidered and withdrawn.

#### Claim 14

Claim 14 stands rejected under 35 U.S.C. § 103(a) over McKeown in view of Pla, and in further view of EP '927. The Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified a tuning port of McKeown, as modified, to have been a tuning port that is integrated into the wall of the housing, in view of the teaching of EP '927, in order to provide an alternate, well-known means of placing the first and second fluid chambers in communication with each other and means for varying the degree of isolation. At least because the proposed combination of McKeown, Pla, and EP '927 fails to disclose or suggest all of limitations of Claim 10, the proposed combination of McKeown, Pla, and EP '927 cannot render Claim 14 obvious.

Claim 14 depends from Claim 10. Accordingly, the remarks above in connection with Claim 10 apply equally to Claim 14. That is, McKeown cannot anticipate or render obvious Claim 14. Pla discloses a piezoceramic actuator plate that is connected to a structure so as to reduce bending vibrations experienced by the structure. EP '927, like McKeown and Pla fails to disclose fails to disclose a vibration isolator comprising at least one piezoceramic actuator coupled to the second piston for selectively transferring forces to the second piston, as disclosed in Claim 10, and therefore also fails to disclose the more specific limitations cited in Claim 14. Thus, McKeown, Pla, and EP '927, whether considered separately or in combination as proposed by the Examiner, fail to disclose or suggest all of the limitations of Claim 14.

In light of the remarks above, it is respectfully requested that the rejection of Claim 14 under 35 U.S.C. § 103(a) over McKeown in view of Pla, and in further view of EP '927 be reconsidered and withdrawn.

#### Claim 16

Claim 16 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of Pla, and in further view of Leibach. The Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the vibrations of McKeown, as modified, to have been harmonic, in view of the teachings of Leibach, in order to provide a means of eliminating imbalance associated with vibrations of a rotating device. At least because the proposed combination of McKeown, Pla, and Leibach fails to disclose or suggest all of limitations of Claim 10, the proposed combination of McKeown, Pla, and Leibach cannot render Claim 16 obvious.

Claim 16 depends indirectly from Claim 10. Accordingly, the remarks above in connection with Claim 10 apply equally to Claim 16. That is, McKeown cannot anticipate or render obvious Claim 16. Leibach discloses mount assembly for a vibrating component, which utilizes a spring mass system to isolate harmonic vibrations. Leibach, like McKeown and Pla fails to disclose a vibration isolator comprising at least one piezoceramic actuator coupled to the second piston for selectively transferring forces to the second piston, as disclosed in Claim 10, and therefore also fails to disclose the more specific limitations cited in Claim 16. Thus, McKeown, Pla, and Leibach, whether considered separately or in combination as proposed by the Examiner, fail to disclose or suggest all of the limitations of Claim 16.

In light of the remarks above, it is respectfully requested that the rejection of Claim 16 under 35 U.S.C. § 103(a) over McKeown in view of Pla, and in further view of Leibach be reconsidered and withdrawn.

#### Claims 21-23

Claims 21-23 stand rejected under 35 U.S.C. § 103(a) over McKeown in view of Pla, and in further view of Leibach. The Examiner states that it would have been obvious



to one of ordinary skill in the art at the time the invention was made to have modified the vibrations of McKeown, as modified, to have been harmonic, in view of the teachings of Leibach, in order to provide a means of eliminating imbalance associated with vibrations of a rotating device. At least because the proposed combination of McKeown, Pla, and Leibach fails to disclose or suggest all of limitations of Claims 21-23, the proposed combination of McKeown, Pla, and Leibach cannot render Claims 21-23 obvious. Claims 22 and 23 depend directly or indirectly from Claim 21. Accordingly, the remarks below in connection with Claim 21 apply equally to Claims 22 and 23.

McKeown discloses a vibration isolator which uses an inductance coil (67) which applies a magnetic force to the tuning slug (33). The magnetic force acting upon the tuning slug (33) affects the acceleration and deceleration of tuning slug (33), so as to provide for a change to the isolation frequency (Col. 7, lines 14-23). It is important to note that tuning slug (33) is constructed out of magnetic material, such that inductance coil (67) produces a forced directly upon the tuning slug (33). Pla discloses a piezoceramic actuator plate that is connected to a structure so as to reduce bending vibrations experienced by the structure. Leibach discloses mount assembly for a vibrating component, which utilizes a spring mass system to isolate harmonic vibrations.

In contrast, Claim 21 is directed to a vibration isolator comprising at least one piezoceramic actuator coupled to the second piston for selectively transferring forces to the second piston. In such an arrangement, the second piston reacts forces from the actuator. This is completely different from the vibration isolator in McKeown which uses to an inductance coil to impart magnetic forces directly *upon a tuning slug*, and the structure in Pla which integrates a piezoceramic actuator to reduce bending vibrations.

Pla and Leibach, like McKeown, fail to disclose a vibration isolator comprising at least one actuator coupled to the second piston for selectively transferring forces to the second piston, as disclosed in Claim 21, and therefore also fails to disclose the more specific limitations cited in Claims 22 and 23. Thus, McKeown, Pla, and Leibach whether considered separately or in combination as proposed by the Examiner, fail to disclose or suggest all of the limitations of Claims 21-23.

In light of the remarks above, it is respectfully requested that the rejection of Claims 21-23 under 35 U.S.C. § 103(a) over McKeown in view of Pla, and in further view of Leibach be reconsidered and withdrawn.

Claim 29, 30, and 32

Claim 29 stands rejected under 35 U.S.C. § 103(a) over McKeown in view of Pla, and in further view of Leibach. The Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the vibrations of McKeown, as modified, to have been harmonic, in view of the teachings of Leibach, in order to provide a means of eliminating imbalance associated with vibrations of a rotating device. At least because the proposed combination of McKeown, Pla, and Leibach fails to disclose or suggest all of limitations of Claim 29, 30, and 32, the proposed combination of McKeown, Pla, and Leibach cannot render Claim 29, 30, and 32 obvious. Claims 29, 30, and 32 depend directly from Claim 21. Accordingly, the remarks below in connection with Claim 29 apply equally to Claims 30 and 32.

McKeown discloses a vibration isolator which uses an inductance coil (67) which applies a magnetic force to the tuning slug (33). The magnetic force acting upon the tuning slug (33) affects the acceleration and deceleration of tuning slug (33), thereby allowing for a change to the isolation frequency (Col. 7, lines 14-23). It is important to note that tuning slug (33) is constructed out of magnetic material, such that the inductance coil (67) produces a forced directly upon the tuning slug (33). Pla discloses a piezoceramic actuator plate that is connected to a structure so as to reduce bending vibrations experienced by the structure. Leibach discloses mount assembly for a vibrating component, which utilizes a spring mass system to isolate harmonic vibrations.

In contrast, Claim 29 is directed to a vibration isolator comprising at least a first multistage piston being configured to define a first plurality of stages in fluid communication with a first fluid chamber, and second plurality of stages in fluid communication with a second fluid chamber. The vibration isolator of Claim 29 further comprises at least one actuator coupled to the first multistage piston for selectively transferring forces to the first multistage piston. This is completely different from the

vibration isolator in McKeown which uses to an inductance coil to impart magnetic forces directly *upon a tuning slug*, the structure in Pla which integrates a piezoceramic actuator to reduce bending vibrations, and the mount assembly for a vibrating component in Leibach.

Pla and Leibach, like McKeown, fail to disclose at least a vibration isolator comprising at least a first multistage piston being configured to define a first plurality of stages in fluid communication with a first fluid chamber, and second plurality of stages in fluid communication with a second fluid chamber, as disclosed in Claim 29, and therefore also fails to disclose the more specific limitations cited in Claims 30 and 32. Thus, McKeown, Pla, and Leibach whether considered separately or in combination as proposed by the Examiner, fail to disclose or suggest all of the limitations of Claim 29, 30, and 32.

In light of the remarks above, it is respectfully requested that the rejection of Claims 29, 30, and 32 under 35 U.S.C. § 103(a) over McKeown in view of Pla, and in further view of Leibach be reconsidered and withdrawn.

**CONCLUSION:**

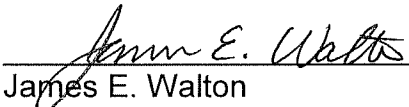
The Applicants submit that the foregoing amendments and remarks place the undisputed claims in condition for allowance.

This Amendment is being filed via the U.S. Patent and Trademark Office's EFS-Web electronic filing system. No fees are deemed to be necessary; however, the undersigned hereby authorizes the Commissioner to charge any additional fees which may be required, or credit any overpayments, to **Deposit Account No. 502806**.

Respectfully submitted,

Date

12/11/09

  
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